REMARKS/ARGUMENTS

In response to the Office Action dated January 14, 2004, Claims 1 and 3 are amended. Claims 5-10, 13-14, and 18-20 are cancelled without prejudice, waiver, or disclaimer to the subject matter contained therein. Claims 1-4, 11-12, and 15-17 remain in the application. Claims 21-22 are added. It is not the Applicants' intent to surrender any equivalents because of the amendments or arguments made herein. Reexamination and reconsideration of the application as amended are respectfully requested.

Non-Art-Based Rejections

In paragraph 2 of the Office Action, the specification was rejected under 35 U.S.C. §112, first paragraph, as being replete with terms that are not clear, concise, and exact. Applicant respectfully submits that the specification has been amended in accordance with the recommendations proposed by the Examiner.

The Office Action also indicated that the term "eccentrically" is not clear. However, Applicant respectfully submits that, according to Webster, the meaning of "eccentrically" is, "in an eccentric manner," and the meaning of "eccentric" is, "deviating or departing from the center, or from the line of a circle; as, an eccentric or elliptical orbit; pertaining to deviation from the center or from true circular motion". As shown in Fig. 4 and described on page 18, paragraph [0031] of the specification, "the target 30 is placed eccentrically to the substrate 9". Clearly, the meaning of the term "eccentrically" is supported by the specification. Therefore, Applicant respectfully requests reconsideration of the term "eccentrically".

In paragraph 3-4 of the Office Action, Claims 5-6 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the

invention. Claims 5-6 have been cancelled; however, the subject matter of Claims 5-6 have been incorporated into Claims 1 and 3, respectively.

To address the indefiniteness of the subject matter of Claims 5-6, Applicant respectfully submits that "a larger number of sputtered particles having direction component along the direction of the magnetic anisotropy" are more likely to be sputtered on the substrate than "sputtered particles NOT having direction component along the direction of the magnetic anisotropy". See pages 39-40, paragraphs [0063]-[0064] of the specification. In one aspect of the present invention, "sputtered particles having direction component along the direction of the magnetic anisotropy" correspond to "the deviant oblique sputtered particles," and "sputtered particles NOT having direction component along the direction of the magnetic anisotropy" correspond to "the center-center sputtered particles". See page 18, paragraph [0031]of the specification.

Applicant respectfully traverses the rejections, but, in order to expedite prosecution of the application, has amended the specification and the claims to overcome the rejection. Applicant believes that any amendments made under this section merely clarify the specification and claim language, and do not surrender any equivalents because of such amendments. It is not Applicant's intent to surrender any equivalents due to amendments made which may touch upon these rejections.

Art-Based Rejections

In paragraphs 5-6 of the Office Action, Claims 1-4, 11-12, and 15 were rejected under 35 U.S.C. §102(b) as being anticipated by Okmura et al. (US 5,700,593).

In paragraph 7 of the Office Action, Claims 1, 3, 11-12, and 15-17 were

rejected under 35 U.S.C. §102(b) as being anticipated by JP 10-162338.

In paragraphs 8-9 of the Office Action, Claims 5-6 were rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Okumura.

In paragraph 10 of the Office Action, Claims 16-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Okumura in view of Chang et al. (US 2002/0132139).

The Applicant respectfully traverses the rejections, however, in order to expedite prosecution, the Applicants have amended the claims. The Applicants respectfully submit that the claims are patentable in light of the amendments above and the arguments below.

The Okumura Reference

The Okumura reference discloses a magnetic recording medium and magnetic recording technology. Okumura teaches a magnetic recording medium including a seed layer, a non-magnetic layer of crystalline Cr or Cr-alloy, a magnetic layer of Co-alloy having a uni-axial magneto-crystalline anisotropy, and a protection layer formed on a non-magnetic substrate. See Col. 3, lines 45-53.

The JP 10-162338 Reference

The JP '338 reference discloses a magnetic recording medium and magnetic recording technology. JP '338 teaches a metal thin film mold magnetic recording data medium including an amorphous layer of Cr-alloy, a crystalline substance layer of Cr-nickel alloy, a substrate layer of Cr, a magnetic layer of Co-alloy, and a protective coat formed on a substrate. See page 2, paragraph [0007].

The Chang Reference

The Chang reference discloses a magnetic recording medium and magnetic recording technology. Chang teaches a magnetic recording medium including a seed layer of Cr, an underlayer of Cr-alloy, an intermediate layer of CoCr- alloy, a lower second magnetic layer of CoCrPtTaB-alloy, an upper first magnetic layer of CoCrPtB-alloy, and a diamond-like carbon (DLC) overcoat formed on a non-magnetic layer. See Col. 2, lines 8-32.

The Claims are Patentable over the Cited References

The claims of the present invention describe a magnetic recording disk a magnetic recording layer prepared on a substrate and an anisotropy-allowing layer prepared between the substrate and the magnetic recording layer. The anisotropy-allowing layer allows magnetic anisotropy in the magnetic recording layer.

The cited references do not teach nor suggest the limitations of the claims of the present invention. Specifically, the cited references do not teach nor suggest the limitation of "a larger number of sputtered particles having the direction component along the direction of the magnetic anisotropy," as recited in the claims of the present invention.

Okumura discloses metal thin film magnetic recording media in which a magnetic layer comprises a Co-alloy having a uni-axial magneto-crystalline anisotropy, such as CoNiCr or CoCrTa. (See Col. 1, lines 10-14). The magnetic layer 4 can be formed with any of Co-alloys such as CoNiCr, CoNiTa and CoCrPt, so long as it exhibits the uni-axial magnet-crystalline anisotropy. See Col. 5, lines 21-23.

As for the uni-axial magneto-crystalline anisotropy in Okumura, there is the description "the underlying CP layer has a function that the Cr crystal structure constituting the underlying Cr layer causes in-plane orientation of the crystal

graphic axis (c-axis) showing the magnetic anisotropy in hep structure of the Co-alloy magnetic layer formed thereon". See Col. 1, lines 28-31. In other words, the magnetic anisotropy disclosed in Okumura is that crystals of the Co-alloy magnetic layer are oriented along a plane, and it is obtained by the function of the underlying layer. Accordingly, this anisotropy is not an inherent feature of the sputtering process, which was purported by the Office Action.

Even though Okumura employs a sputtering process, it has no relevance to the anisotropy in Okumura. The anisotropy in Okumura is achieved by the function of the underlying layer.

Moreover, the anisotropy in Okumura refers to crystals that are oriented in a plane. That is, (100) and (211) are designation of planes in crystal structures. See Col. 3, lines 8-14 and Col. 6, lines 26-33. Okumura does not consider which direction to orient in the plane.

In contrast, the anisotropy in the present invention is achieved by the direction control of the sputtered particles, as required by amended independent Claims 1 and 3. The direction control of the present invention is not disclosed nor suggested in Okumura. Therefore, the anisotropy obtained by direction control in the present invention is not disclosed nor suggested in Okumura.

Furthermore, the anisotropy in the present invention is concerned with the orientation of crystals to a direction in a plane, for example, a circumferential direction. See page 39, paragraph [0063] of the specification.

The ancillary JP '338 and Chang references are not seen to remedy the deficiencies of the primary Okumura reference. Specifically, JP '338 and Chang do not disclose nor suggest the limitation of sputtering "a larger number of sputtered particles having the direction component along the direction of the magnetic anisotropy," as recited in the claims of the present invention.

As such, independent Claims 1 and 3 are allowable over the cited references. Further, Claims 2, 4, 11-12, and 15-17 are also patentable over the cited references, not only because they contain all the limitations of the independent claims, but also because that recite additional novel elements and features not found in the prior art.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6742 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

Date: July 14, 2004

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